SPECIFICATION AMENDMENTS:

Please replace the paragraph at lines 3 - 10 on page 2 with the following:

Because of their ability to simulate the apparently oscillatory nature of brain neurons, oscillatory neural network computers are among the more promising types of neural network computers. Simply stated, ~~the elements of~~ an oscillatory neural network computer ~~consist of~~ includes oscillators ~~rather than amplifiers or switches~~. Oscillators are mechanical, chemical or electronic devices that are described by an oscillatory signal (periodic, quasi-periodic, almost periodic function, etc.) Usually the output is a scalar function of the form $V(\omega t + \phi)$ where V is a fixed wave form (sinusoid, saw-tooth, or square wave), ω is the frequency of oscillation, and ϕ is the phase deviation (lag or lead).

Please replace the paragraph at lines 15 - 30 on page 5 with the following:

FIG. 2 schematically illustrates an embodiment of a weighting circuit ($C_{1,1}$, $C_{1,2}$, ..., $C_{N,N}$) in accordance with the present invention. In this embodiment, weighting circuits $C_{1,1}$, $C_{1,2}$, ..., $C_{N,N}$ comprise a linear amplifier 23 having an input terminal connected to a respective output terminal OUT_1, OUT_2, ..., OUT_{N-1}, OUT_N. An output terminal of linear amplifier 23 is connected to an input terminal of phase shift circuit 24. An output terminal of phase shift circuit 24 is connected to a corresponding adder circuit 31. The output signal appearing on the output terminal of phase shift circuit 24 is ~~given by~~:

$$[[V(\theta) =]] \; S_{k,j} * V(\theta + \psi_{k,j}) \tag{1}$$

where

$S_{k,j}$ is the connection strength (gain) of weighting circuit $C_{k,j}$, as provided by its linear amplifier 23; and

$\psi_{k,j}$ is the phase shift introduced by phase shift circuit 24 of the weighting circuit.